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PROCUREMENT

Department of Defense Quality Assurance Efforts

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The Honorable John D. Dingell
Chairman, Subcommittee on
Oversight and Investigations
Committee on Energy and Commerce
House of Representatives

Dear Mr. Chairman:

This fact sheet is in response to your October 7, 1987, request concerning the Department of Defense's (DOD) quality assurance activities. As agreed, the objectives of our work were to

-- determine how much nonconforming material may be in the DOD inventory,

-- review DOD's quality deficiency reporting system to determine its use in identifying the contractors that repetitively sell nonconforming material, and

-- determine if actions were taken to stop purchasing from those contractors.

Also as agreed, we excluded major weapon systems, fasteners, and in-plant quality assurance efforts from our review because these topics were being covered under separate investigations by the Subcommittee staff. Appendix I contains the detailed information we compiled on DOD's quality assurance program and appendix II discusses our objectives, scope, and methodology.

We found that neither DOD, the military services, nor the Defense Logistics Agency (DLA) have enough data to reliably estimate the total amount or the value of nonconforming material that may be in their inventories. DOD quality assurance officials told us that it is almost impossible to determine how much nonconforming material may be in the inventory because they do not perform 100-percent receipt inspection. However, based on samples taken, these officials believe that the items in the DOD inventory are of high quality.

DOD's quality deficiency reporting system was designed to initiate corrective actions where nonconformances are discovered, usually by the users, after the government has accepted the item. The system is based on the Quality Deficiency Report (QDR). A QDR, describing a problem and identifying the contractor, is submitted to appropriate activities to initiate corrective action. However, DOD studies have shown that this system is not always a reliable means of identifying nonconforming goods and problem contractors because of problems such as the lack of DOD-wide data systems to track contractors' quality history or to help exchange information between DOD procurement activities. DOD has established a quality assurance working group with responsibility for correcting these system problems.

Generally, contracting officers should use contractor history quality data in determining contractor responsibility at source selection. There is no DOD-wide contractor history system primarily because the services and DLA are unable to agree on how the data in a DOD-wide system should be compiled and maintained. The services and DLA compile and maintain their own separate contractor history files since one is not available DOD-wide. They maintain lists of problem contractors and use this data to aid in determining contractor responsibility at source selection. The problem contractor lists are not used to exclude contractors from the procurement process, but rather to alert contracting officers that a quality problem may exist. DLA officials told us they are considering developing a proposal to consolidate all of these listings into one list.

According to DOD quality assurance officials, there is no practical way, on a DOD-wide basis, to determine how often contractor bids and/or proposals are rejected and contractors found nonresponsible on the basis of their poor quality histories. These DOD officials also told us that in the past, too many contracts may have been awarded without adequate quality considerations. DOD now faces a difficult task in determining how to integrate quality considerations more effectively in the source selection process.

During source selection, contracting officers must consider quality factors along with evaluation factors; for example, cost and schedule. We were told that contracting officers sometimes continued to award contracts to contractors with histories of quality problems. Among the reasons cited were (1) the contractor was the only source, (2) the item was urgently needed, or (3) the contractor was making progress in improving prior poor quality performance.

While DOD's 1978 Directive 4155.1, entitled "Quality Program" states that future contracts should not be awarded to contractors providing nonconforming products, DOD officials responsible for the policy told us that this directive was not intended to arbitrarily exclude all such contractors from government contracting. These officials told us that DOD would prefer not to award contracts to contractors with a history of quality problems; however, when it is necessary, DOD will negotiate with such contractors and attempt to identify and resolve quality problems.

DOD is currently involved in integrating its quality assurance efforts into a strategy it calls, "Total Quality Management." DOD officials told us that high quality can only be achieved with a total cultural change within the DOD procurement community. Under its Total Quality Management strategy, DOD intends to increase the emphasis on quality in the early stages of the acquisition cycle and to make quality a factor equal in importance to the evaluation factors of cost and schedule.

As requested, we did not obtain official DOD comments on this fact sheet. However, we did discuss it at an exit conference with DOD officials and they concurred with the accuracy of the facts presented.

As arranged with your Office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 10 days from the date of the report. At that time we will send copies to the Chairmen, Senate and House Committees on Armed Services and Appropriations, Senate Committee on Governmental Affairs, and House Committee on Government Operations; the Secretaries of Defense, Army, Navy, and Air Force; and the Director, DLA. Copies will be made available to others on request. If we can be of further assistance, please call me on 275-4587.

Sincerely yours,

Paul F. Math
Senior Associate Director

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ABBREVIATIONS

DESC	Defense Electronics Supply Center
DISC	Defense Industrial Supply Center
DLA	Defense Logistics Agency
DOD	Department of Defense
FAR	Federal Acquisition Regulation
QDR	Quality Deficiency Report
SBA	Small Business Administration

DOD'S QUALITY ASSURANCE PROGRAM

BACKGROUND

Assuring the quality of the goods purchased is an important factor in all phases of the DOD procurement process. For example, in the contract source selection phase, the quality history of prospective contractors can be a key evaluation factor. In addition, the government has long recognized that it is false economy to award a contract based on the lowest price and later find that the item delivered is of such poor quality that it cannot be used for its intended purpose. In the contract administration phase, both the government and contractor are concerned about quality assurance in the production of an item and its parts. Depot managers and military personnel who must ultimately use the items are concerned about quality as it affects their ability to perform military missions and the safety of the personnel assigned to carry out those missions.

Quality considerations are addressed in government procurement regulations. For example, the Federal Acquisition Regulation (FAR) system, DOD, the services, and DLA (DOD components) implementing instructions and regulations provide guidance intended to ensure that the products procured by the federal government meet quality requirements.

QUALITY AS A FACTOR IN SOURCE SELECTION

Responsibility determinations

An essential step in every procurement involves determining whether an offeror is qualified to be a government contractor, that is, determining if the offeror is responsible. It is a government policy that contracts be awarded only to responsible prospective contractors.

To demonstrate responsibility, every prospective contractor must meet certain criteria. The prospective contractor must have a satisfactory performance record and prove to the contracting officer's satisfaction that it has, or can obtain, the necessary organization and quality assurance controls. Without information clearly showing that a prospective contractor is responsible, the contracting officer must determine the contractor to be nonresponsible and thus, not qualified to be a government contractor. A prospective contractor that is or recently has been

seriously deficient in contract performance shall be presumed nonresponsible, unless the contracting officer determines that the circumstances causing the performance deficiencies were beyond the contractor's control or that the contractor has subsequently taken appropriate corrective action.

FAR stipulates that when the information available to the contracting officer is insufficient to determine responsibility, and if circumstances justify the cost, a preaward survey should be performed. A contractor's quality controls and production capabilities are some of the factors investigated in a preaward survey. Preaward surveys are performed either by the cognizant contract administration office[1] or other surveying activities.

If the contracting officer makes a negative determination of responsibility regarding a small business concern's offer, that small business can then request assistance from the Small Business Administration (SBA). SBA has statutory authority to certify the competency of any small business concern as to all elements of responsibility. Contracting officers must accept SBA certificates of competency as conclusive evidence of a small business' responsibility unless they doubt the concern's ability to perform, in which case, the matter is appealed to SBA Headquarters, which has the final decision authority.

Debarment and suspension

To protect the government against the risks encountered when doing business with fraudulent or nonperforming contractors, FAR prescribes policies and procedures for debarment and suspension. Debarment is an action taken to exclude a contractor from government contracting for a reasonable, specified period of time, not to exceed 3 years. This usually occurs after criminal conviction or civil judgment for certain acts, including commission of fraud or any offense indicating a serious lack of business integrity. A history of failure to perform, and any other cause of so serious a nature that it affects the present responsibility of a government contractor, also justify debarment. Suspension is used to temporarily disqualify a contractor from government contracting normally up to 18 months. Suspension may occur when a contractor is suspected, based on adequate evidence

[1]DLA performs various contract administration functions on behalf of the military services, including preaward surveys. This work may be performed by personnel within 1 of the 39 geographically located Defense Contract Administration Service Management Areas located within DLA's 9 Defense Contract Administration Services Regions.

such as a criminal indictment, of offenses similar to debarment offenses. According to the DOD Inspector General, in fiscal year 1987, DOD debarred 505 contractors and suspended 393 contractors.

Only material conforming to the contract should be accepted

FAR contains provisions that are designed to ensure that only material conforming to contract requirements is accepted by the government. Nonconforming supplies are rejected unless it is in the best interest of the government to accept the nonconforming material. FAR directs agencies to ensure that government contract quality assurance is performed before acceptance. Once the government accepts nonconforming supplies, the government's recourse can be limited because FAR states that acceptance constitutes acknowledgment that the supplies conform to applicable contract quality and quantity requirements.

Under appropriate circumstances, the government can receive warranties for an added contractual right that requires the contractor correct defects discovered during the warranty period despite any other contract requirement pertaining to the government's acceptance of supplies.

Contractor is responsible for quality

FAR states that contractors are responsible for

-- controlling the quality,

-- providing the government with only those supplies that conform to contract requirements,

-- ensuring that vendors or suppliers have quality control systems, and

-- maintaining substantiating evidence, when required by the contract, that the supplies conform to contract quality requirements.

The government's quality assurance representative may request the contractor to take additional corrective actions if inadequacies are discovered in the actual operation of contractor's quality assurance and inspection programs during production. The actions depend on the nature and importance of the deficiencies uncovered. If the deficiency is minor, the government's quality assurance representative can take on-the-spot corrective action with the contractor's personnel. If the defect is other than minor, the government's quality assurance representative may take stronger

actions, such as rejecting the items, discontinuing government inspections until appropriate corrective action is taken, and forwarding a letter to top management requesting immediate corrective action.

DOD'S QUALITY PROGRAM

In 1978, DOD issued Directive 4155.1, entitled "Quality Program." The Under Secretary of Defense (Acquisition) is responsible for promulgating DOD's quality policy through the DOD Quality Assurance Council chaired by the Deputy Assistant Secretary of Defense (Production Support). The Council is primarily responsible for developing a policy on quality and for ensuring implementation within the DOD components. The Director, Industrial Productivity and Quality Office, in the Office of the Secretary of Defense, has primary responsibility for the quality assurance policy, performs the necessary administrative functions related to the Quality Assurance Council, leads implementation efforts, and serves as the catalyst to deal with procedural differences among the DOD components.

The Office of the Secretary of Defense does not maintain quality assurance data

The Industrial Productivity and Quality Office promulgates the quality assurance policy; however, it is not active in the daily management and operations of the Army, Navy, Air Force, and DLA quality assurance programs. The director stated that the office does not maintain quality assurance data, and therefore, no DOD-wide trend data is readily available on the number of nonconforming items that may be in its inventory.

The quality office officials told us that DOD has no real means of measuring the quality of its inventory because they do not perform 100 percent receipt inspection. However, based on samples taken, they believe that the items in the DOD inventory are of high quality. In fiscal year 1986, the last year for which complete data were available, DOD valued its world-wide inventory at approximately $203.6 billion.

QUALITY DEFICIENCY REPORTING SYSTEM

In addition to various contractor and DOD in-plant quality controls and receipt inspection programs, there is also a quality deficiency reporting system that is designed to initiate corrective actions where nonconformances are discovered, usually by the users, after the government has accepted the item.

Joint regulation on QDRs

DOD's Joint Regulation,[2] titled "Reporting of Product Quality Deficiencies Across Component Lines," promulgates the policy for reporting product quality deficiency data among the DOD components. The Joint Regulation is part of the overall quality assurance program required by DOD Directive 4155.1 and was intended to establish a system for feedback of product quality deficiency data as well as for identifying contractors, problems, trends, and recurring deficiencies.

The Joint Regulation requires a cross-component system that will feed back quality data to activities responsible for design, development, purchasing, production, supply, maintenance, contract administration, and other functions so that action can be initiated to correct and prevent product quality deficiencies.

The Joint Regulation also requires that quality deficiency data be reported across DOD components' lines in a timely manner so that the cause of the quality deficiencies can be promptly determined and corrected, and preventative action can be taken to preclude recurrence.

DOD components are required to have QDR systems. Among the QDR system elements required are

-- a process for the activity originating the report to document the quality deficiencies,

-- the use of a standard QDR form (SF 368) for reporting product quality deficiencies and identifying the contractor,

-- responsible screening and action offices to receive QDRs from other DOD activities and determine if a contract warranty applies,

-- analysis and investigation capabilities to ensure that timely actions are taken to address and correct the cause of confirmed deficiencies,

-- capabilities to selectively notify other government users of products reported to be nonconforming and to provide disposition of nonconforming material in stock and in use throughout the DOD/General Services Administration system when necessary, and

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[2]DLA: DLA Regulation No. 4155.24, Army: AR 702-7, Navy: SECNAVINST 4855.5, Air Force: AFR 74-6.

-- capabilities to request and control deficient material exhibits held for investigation.

QDR system reviews reveal some problems

Our office, the DOD Office of the Inspector General, and a DOD Quality Assurance Council Working Group have found some problems in reviews of the QDR system.

In a 1985 report[3] based on a limited analysis, we concluded that the Army's QDR system was generally effective in identifying and resolving deficiencies in fielded equipment. However, in about 21 percent of 125 sample transactions, reported problems were not being investigated and resolved because the defective items were not available for examination.

A 1986 DOD Inspector General's report[4] concluded that 57 percent of QDRs reviewed in two Defense Contract Administration Services Regions contained information that was insufficient to determine the cause of the stated deficiency.

A 1987 DOD Inspector General's report[5] concluded that all quality deficiencies were not reported, but the number of known nonconforming items not being reported was relatively small. This conclusion was based on a statistical projection from a universe of 73,188 contract actions (including contracts and modifications) valued at $64.8 billion. It showed that there were 3,952 contract actions valued at $279 million (0.4 percent) that involved nonconforming items for which QDRs were not prepared. The universe did not include contract actions under $25,000.

Members of an industry association told us that the current QDR system is inadequate. They believe it takes DOD too long to process a QDR, thus making it difficult for a contractor to retroactively determine what caused the nonconformance and to take appropriate corrective action.

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[3]Army's Quality Deficiency Report System: Generally Effective but Some Changes Needed (GAO/NSIAD-85-115, July 10, 1985).

[4]Processing of Quality Deficiency Reports in the DLA (DOD-IG-86-131, Aug. 28, 1986).

[5]Report on the Follow on Audit of Known but Unreported Defective Material (DOD-IG 87-083, Feb. 11, 1987).

DOD's Quality Assurance Council working group

According to DOD quality assurance officials, the effectiveness of the DOD-wide QDR system in identifying and resolving problems with nonconforming items is only fair to good. However, DOD is trying to improve the effectiveness of the QDR system through the Quality Assurance Council Working Group (QDR working group) which was permanently established in 1987.

The QDR working group identified the following problems:

-- DOD activities are procuring products that do not meet quality levels--material, design, procurement, and maintenance deficiencies exist in many of the products.

-- Several independent initiatives have been started by the DOD components to establish better deficiency reporting programs. Although each is based on internal DOD component needs or objectives, none are addressing the overall problem of standardizing and improving the timeliness and effectiveness of the DOD deficiency reporting process.

-- Rather than being retained, exhibits (the actual nonconforming items) required for deficiency investigation are instead being repaired or returned to service at the QDR origination point to maintain a required readiness level. Screening for additional nonconforming material in the supply system is not being initiated as the result of valid QDRs. Administrative time and low priority given to exhibit management (for example, exhibit storage, shipment, and administration) has resulted in the nonavailability of essential exhibits required for investigation to enact effective corrective action as well as millions of dollars in exhibits being poorly controlled and not returned to operational readiness on time.

-- Each DOD component has an automated information system to store and track the status of the investigation and resolution actions. However, these systems are each unique to themselves, nonstandard to each other, contain dissimilar data and data elements, and have no electronic interface to each other.

-- An integrated automated system to track contractor quality history or to help exchange information between activities is lacking, even though these data have a direct relationship to each other.

-- The lack of any contractual requirement for the contractor to perform investigations and take appropriate actions in a timely manner has resulted in Air Force assets being held in storage at

DOD or contractor facilities for long periods of time awaiting inspection and problem resolution.

-- Air Force contractors have refused to perform QDR investigations, unless contractually required.

QDR working group objectives

The QDR working group has been given the task of improving the QDR process. The group's plan for correcting the problems identified is directed at

-- standardizing and simplifying deficiency reporting, processing, and resolution requirements for QDRs;

-- developing a predictive analysis capability;

-- providing for the routine exchange and use of deficiency data between activities via a network of automated information systems;

-- developing a standard criteria for implementing a contractor quality history file within each component;

-- improving the control and disposition of deficiency exhibits;

-- developing requirements for an information feedback system to improve corrective action relative to design, procurement, maintenance, and material deficiencies; and

-- exploring methods for more responsive contractor participation in the deficiency report investigation and resolution process.

CONTRACTOR HISTORY DATA

As mentioned earlier, contracting officers are required to use contractor history data, including quality data, during source selection on new contract awards. However, no DOD-wide contractor history data system is available due to the lack of an agreement among the DOD components on how the data should be compiled and maintained. While there is no DOD-wide contractor history file, the DOD components do compile and maintain their own problem-contractor lists.

The DOD components use these lists of problem contractors in source selection when determining responsibility. However, a DOD quality assurance official told us that determining how often contractors are found nonresponsible and their offers rejected due to the poor quality history of a contractor is not possible. This

official contends that in the past too many contracts were awarded without an adequate consideration of quality. DOD now faces a difficult task in determining how quality can be integrated more effectively into the source selection process.

Industry officials told us that contractor performance and quality history should be major factors in source selection and that, in the past, price may have been emphasized too much.

No DOD-wide contractor history data system

While DOD Directive 4155.1 requires that contractor quality history data be maintained by DOD components, no DOD-wide contractor quality history file is available. A DOD quality assurance official said that the file is not available because the DOD components have not been able to agree

-- on what should be in a standardized contractor history data base,

-- how to collect such contractor history data,

-- how to use the data,

-- how to make it available,

-- how to evaluate such data objectively rather than subjectively, and

-- how to ensure that the data would be distinguished between nonconformances caused by the government and those caused by contractors.

The official also said that DOD was still attempting to determine how to establish a DOD-wide contractor history data base with an objective evaluation system.

The industry associations and their members told us they support the use of contractor history files by the government in source selection. However, they expressed concern over the criteria to be used in contractor evaluations; for example, whether positive attributes would be used in addition to negative attributes. They also expressed concern about the objectivity of the evaluation process.

Services and DLA lists of problem contractors

DOD activities, responsible for procurement and quality, compile, maintain, and use lists of contractors that have various problems,

including a history of late deliveries, poor quality, debarments, and suspensions. For example, the Navy compiles a Vendor Data Analysis Report, the Air Force compiles a Contractor Experience Information Index, and the Army compiles a Contractors Requiring Special Attention List. All services and DLA must also use the Consolidated List of Debarred, Suspended, and Ineligible Contractors which is maintained and updated by the General Services Administration. In addition, DOD activities may use lists provided by other activities.

According to DLA officials, DLA initiated a Contractor Alert List in April 1985, which is currently issued monthly to 271 DOD procurement activities. The list is based on information gathered from the Defense Contract Administration Services regions. The list identifies whether contractors (1) have been recommended for a preaward survey, (2) received a negative preaward survey within the last 30 days, or (3) are in the Contractor Improvement Program.[6] The list contained 1,031 contractors as of May 1988.[7]

The list includes contractors that are experiencing problems in quality, production, or technical areas. The list notifies contracting officers that the contractors may need additional evaluation before a responsibility determination is made and DLA contract administration offices should be contacted to determine the need for a preaward survey.

If a contractor appears on DLA's Contractor Alert List or one of the other component contractor lists, other than the suspension and debarment list, it does not prevent a contractor from receiving a contract. DOD quality assurance officials said they do not deny contractors the opportunity to seek government contracts solely because their name is on any problem contractor

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[6]The DLA Contractor Improvement Program is designed to help contractors resolve chronic problems that affect performance. The majority of contractors in this program are listed for production difficulties that result in a substantial delinquency rate. They are also placed in this program for (1) failing to take appropriate corrective action on problems brought to the contractor's attention by the government and (2) having severe quality deficiencies. When a contractor demonstrates that its problems have been corrected, it is removed from the program.

[7]The list contains both large and small contractors. Data was not available on the number of contractors who received awards under $25,000. However, during fiscal year 1987, there were about 42,000 contractors who received DOD contract awards of $25,000 or more.

list. These lists only require the contracting officer to be more careful in reviewing the contractor during source selection. According to DLA officials, it is difficult to measure the effectiveness of DLA's Contractor Alert List because it does not require contracting officers to take any action before they award contracts. The DLA officials told us it is virtually impossible to determine to what extent the list is used, if at all.

DLA officials said that although all of these DOD component contractor lists have different distribution networks and criteria for listing, they have the same general function--alert contracting officers of potential problems. The Commander, Defense Contract Administration Services Region, Boston (the activity responsible for compiling the DLA Contractor Alert List), would like to consolidate all of these listings and standardize the information into one list. The DLA official said a study is underway to develop a proposal to consolidate the listings. However, this proposal has met resistance. This DLA official believes DOD component procurement personnel prefer to keep their own listings and do not want to give them up for an expanded DLA Contractor Alert List. The official also stated that others fear that expanding the list will make it less useful because it will become too large. The official estimates that a complete listing would increase the number of contractors on the list from 1,000 to 1,500.

DOD EXPLANATIONS FOR AWARDING CONTRACTS TO CONTRACTORS WITH QUALITY PROBLEMS

Information about a prospective contractor's past performance on military contracts can be helpful in evaluating its ability to perform successfully on future contracts. However, equating a contractor's past performance with its future ability to produce must be made carefully because conditions may change in the interim.

As previously discussed, a contracting officer is required to award a contract only to a contractor determined to be responsible. This determination of responsibility should include a review of the contractor's quality history. DOD's directive on quality also requires that contracts not be awarded to a contractor with a history of supplying nonconforming goods. As a practical matter, however, a contracting officer has considerable discretion in determining quality along with other source selection factors so long as the best interests of the government are protected.

DOD believes Directive 4155.1 on quality needs to be revised

DOD Directive 4155.1 states that contractors will be responsible for product quality, and that future contracts are not to be awarded to contractors that have previously provided unsatisfactory products. However, DOD quality assurance officials responsible for the quality policy stated that the directive was not intended to arbitrarily exclude from government contracting, all contractors with a history of quality problems. These officials told us that the directive should be revised to state that DOD prefers not to award contracts to contractors with a history of quality problems. However, when it is necessary, DOD will negotiate with these contractors and attempt to identify and resolve their quality problems.

We found that contracts are being awarded to contractors that have repetitively supplied nonconforming goods to the government. Contracting officers gave the following reasons for awarding contracts to contractors with past quality problems:

-- The contractor improved its quality controls and the quality of the items being sold to the government.

-- The price offered by the contractor was lower than the price of another competitor.

-- The contractor remained the only source for the item after contracting officers unsuccessfully attempted to convince other potential sources to compete.

-- The contractor, a small business, appealed the contracting officer's determination of nonresponsibility to the SBA which investigated and subsequently awarded a Certificate of Competency.

-- The program manager was anxious to award the contract before the end of the fiscal year.

-- The contracting officer believed that on prior contracts the number of nonconforming items was small compared to the total number of items ordered.

-- There was an urgent need for the item.

We found examples where service and DLA contracting officers took corrective actions involving contractors with quality problems, including the following:

-- working with the contractor to improve in-plant quality assurance controls,

-- requiring 100-percent source inspection,

-- attempting to increase competition by soliciting other potential sources, and

-- initiating suspension and debarment actions.

DOD'S NEW TOTAL QUALITY MANAGEMENT STRATEGY

DOD is attempting to integrate all of its efforts related to quality into a coordinated DOD Total Quality Management strategy. The prime goal is the delivery of high quality hardware and software to the DOD components. DOD officials believe that this can only be achieved with a total cultural change in DOD with respect to the attention given to the continuous improvement of quality. DOD believes that the Total Quality Management strategy should provide the necessary training and incentives for industry and government personnel to improve the quality and reduce the cost of DOD weapon systems and equipment.

Cultural change

Total Quality Management emphasizes quality early in the acquisition process, starting with the requirements definition, and continuously improving the quality of the item. DOD is seeking a cultural change from

-- defect correction to defect prevention;

-- quality inspected into products to quality designed and built into the process;

-- acceptable levels of defects to continuous process improvements;

-- lowest procurement cost to optimum life-cycle cost; and

-- emphasis on cost and schedule to emphasis on quality, cost, and schedule.

DOD officials said that the most serious problem regarding quality assurance efforts is the need for a complete cultural change to implement Total Quality Management.

DOD initiatives in quality and source selection

DOD activities have initiated a number of programs to improve the source selection process. For example, DLA has implemented a new test program, Blue Chip Vendor List Program, where contracting officers can award contracts using quality as a criteria as well as price. Lists of Blue Chip suppliers whose performance has been superior in both quality and timeliness will be eligible for preference in award evaluations. A Blue Chip supplier may be awarded a contract if its offer is within 20 percent of the lowest price offered by a non-Blue Chip supplier.

DLA is also working on a number of initiatives to get as much information as possible to procurement activities before award; for example, the automation of the preaward survey process which is currently being tested. The system will work by creating an electronic transfer capability for a bulletin board based program. Procurement activities will be able to request a survey and receive its results through this system. These activities will be able to extract preaward survey information and request to look at specific sections of the survey. This system will allow procurement activities to receive information quickly and allow preaward survey information to be communicated systemwide.

In addition, DLA plans to create an on-line Contractor Performance Profile data base. This data base will include a comprehensive contractor history, including contract and item information, financial data, and performance history. DLA's Contractor Alert List will be input into this profile, and allow a contracting officer to determine whether or not a contractor is on the list. This file will be available to all procurement activities.

In-plant inspection versus receipt inspection

DOD officials expressed various opinions concerning the appropriate acquisition phase in which to place government quality assurance resources. Some believe that DOD needs to emphasize in-plant inspection because receipt inspection occurs too late to take timely corrective actions that would prevent the contractor from wasting resources in producing nonconforming items. Others believe that the government should decrease in-plant inspections and increase receipt inspections to reduce the perception that the government has a lax receipt inspection system permitting the purchase of nonconforming items. DOD quality assurance officials believe that it is more important to improve a contractor's production process rather than rely on government inspection at the end of the process.

Inspection efforts at DLA's supply centers

DLA's Defense Electronics Supply Center (DESC) and Defense Industrial Supply Center (DISC) have initiated testing programs to detect nonconformances.

In 1978, DESC implemented a test program to deter counterfeiting and excessive quality deficiencies in the electronic devices which it manages. Since fiscal year 1979, DESC's test activity has examined and tested over 400,000 devices from more than 7,000 lots covering the procurement of over 10 million electronic parts.

DESC's test activity has five general testing programs: (1) receipt inspection, (2) a stock quality assurance program for material stored at depots, (3) testing material in support of other activities, (4) destructive physical analysis of aerospace microcircuits, and (5) a commercial test support program to supplement DESC's test functions. In fiscal year 1987, DESC reported that 2,259 test projects were completed in the 5 programs with receipt inspection accounting for 1,206 projects, stock quality assurance accounting for 855 of the projects, and the other 3 programs accounting for the remaining 198 projects.

According to DESC reports, the overall receipt inspection rejection rates have been decreasing from 1982 through 1987. Lot failure rates have decreased from 6.1 percent to 4.3 percent for military specified items and from 47.6 percent to 8.2 percent for nonmilitary items.

Influenced by DESC's success, DISC established a testing activity in 1984 to test such items as bulk metal products, fasteners, and electrical wire. Unlike DESC, DISC did not develop its own test laboratory, instead, DISC contracted with commercial testing laboratories. DISC currently has contracts with 400 commercial laboratories. The DISC test activity does not routinely sample depot stocks, rather it responds to specific requests from DOD activities.

For fiscal year 1985 through 1st quarter 1988, DISC data shows that it initiated over 4,000 testing projects, incurred testing costs of about $2.3 million, and achieved an estimated savings of about $16 million. In fiscal year 1987, DISC initiated 2,000 testing projects costing $1.2 million with an estimated savings of $3 million.

DESC and DISC managers believe that the increased awareness by contractors of the testing efforts has improved quality. DESC managers reported that the success of the DESC test program is a

result of a sampling program as opposed to a 100-percent screening of items received.

OTHER ISSUES

As requested, we performed follow-up work at the Corpus Christi Army Depot and inquired about fasteners on the Air Force C-5A and C-5B aircraft at the San Antonio Air Logistics Center.

Corpus Christi Army Depot

In December 1987, we issued a report[8] on repair parts at Corpus Christi Army Depot located in Corpus Christi, Texas. The depot supports the Army by overhaul and repair of the Army's helicopters and parts. Our report stated that repair parts shortages had been increasing at the depot causing significant maintenance cost increases and reductions of available aircraft. Lengthy procurement processing delays and increasing numbers of nonconforming parts received from contractors contributed to the shortages. As of January 1987, the depot was averaging 393 parts shortages per month.

During our visit in April 1988, Corpus Christi Depot officials told us that the number one problem is still repair parts shortages. However, they said it is less critical now than it was when we completed our earlier audit work. As of April 1988, the number of shortages had dropped to 228 per month. Corpus Christi Depot officials said that even though parts shortages are not causing any production line shutdowns, shortages are still causing some reduction in the scheduled production output. According to these officials, the Depot is repairing worn and nonconforming parts and manufacturing some parts because of the parts shortages.

C-5A and C-5B issues

Air Force officials responsible for the C-5A told us that they were not having any problems with C-5A fasteners. The Subcommittee staff subsequently asked us to inquire about C-5B fasteners. An Air Force official told us that there was a problem with the contractor inappropriately mixing the use of aluminum and stainless steel fasteners on the C-5B in the past. However, the contractor had replaced incorrect fasteners before any C-5B aircraft were delivered to the government.

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[8]Depot Maintenance--Problems in Procuring Helicopter Parts Result in Shortages and Added Costs (GAO/GGD-88-20, December 1987).

APPENDIX II

OBJECTIVES, SCOPE, AND METHODOLOGY

In response to an October 7, 1987, request from the Chairman, Subcommittee on Oversight and Investigations, House Committee on Energy and Commerce, we reviewed selected aspects of DOD's quality assurance activities. As agreed, the objectives of our review were to

-- determine how much nonconforming material may be in the DOD inventory,

-- review DOD's quality deficiency reporting system to determine its use in identifying the contractors that repetitively sell nonconforming material, and

-- determine if actions were taken to stop purchasing from those contractors.

We also agreed to exclude major weapon systems, fasteners, and in-plant quality assurance efforts because these topics were being covered under separate investigations by the Subcommittee staff.

We performed limited work (1) to follow-up on our earlier report regarding quality assurance problems at the Army's Aviation System Command and Corpus Christi Army Depot, (2) on DLA's test facilities at DESC and DISC, and (3) on issues related to Air Force C-5A and C-5B aircraft fasteners.

We interviewed officials at the following locations:

-- Army, Aviation Systems Command, St. Louis, Missouri, and Corpus Christi Army Depot, Corpus Christi, Texas;

-- Navy, Ships Parts Control Center, Mechanicsburg, Pennsylvania; Fleet Material Support Office, Mechanicsburg, Pennsylvania; Aviation Supply Office, Philadelphia, Pennsylvania; and Naval Ordnance Station, Louisville, Kentucky;

-- Air Force, San Antonio Air Logistics Center, San Antonio, Texas; and

-- DLA, Defense Personnel Support Center, Philadelphia, Pennsylvania; DISC, Philadelphia, Pennsylvania; and DESC, Dayton, Ohio.

We gathered and analyzed quality assurance data and discussed the validity of our facts with officials at these sites. In addition, to gain greater insight of quality assurance policy and

procedures, we interviewed officials in the Office of the Secretary of Defense, Army, Navy, Air Force, and DLA Headquarters units responsible for quality, and DLA Defense Contract Administration Services Region, Boston, where the DLA contractor alert list is maintained. To gain industry's perspective on DOD's quality assurance efforts, we contacted industry associations, including the Aerospace Industries Association, Electronic Industries Association, and National Security Industrial Association in Washington, D.C.

We performed our work in accordance with generally accepted government auditing standards from November 1987 to August 1988.

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